



August 18, 2004 Building 1, Room 920L 2:00 – 4:00 pm

Attendees

CCB members and other attendees are listed in Attachment 1. Note due to issues with the teleconference Jack Keifenheim was not able to connect to the meeting when he tried.

Meeting Schedule - Steve Porter/NASA-JSC/EA

- □ The Tag-up Meeting scheduled for August 25, 2004 has been canceled.
- There has been a change CCB Meeting scheduled for September 1, 2004. The agenda for this meeting involves the approval of AMS-CR-04-003: PTRS for the AMS-02 Payload Integration Hardware (Revision A). If there are SIGNIFICANT issues that Trent Martin cannot work out with the issue initiator, we'll have a telecon'd CCB on September 1, 2004 at 6 p.m. EASTERN U.S. Time (5 p.m. CST). However, if we do have this meeting, only the issue initiator, Donna Cox, Trent, and myself will be mandatory participants, but all are welcome and we will summarize the decisions at the next CCB. If there are no significant issues, Trent Martin will notify all CCB & Team Members that the meeting is cancelled (this email will be out by noon Tuesday, August 31, 2004.)
- □ The following items are on the CCB agenda currently scheduled for September 8, 2004.
 - Official sign-off of change request AMS-CR-04-001, AMS-CR-04-002, and AMS-CR-04-003.
 - Report of electronic approval of AMS-CR-04-001, AMS-CR-04-002, and AMS-CR-04-003.
 This will be need to go into the quality system.
 - ACOP Discussion lead by Paul Nemeth and Bill Hungerford.
 - Action items 04-007, 04-010, 04-018, 04-044, 04-053, 04-057, and 04-073
- □ The Tag-up Meeting scheduled for September 15, 2004 will be a non-mandatory NASA Only cost and schedule review with LMSO.
- New Action Item (04-083) Donna Cox/LMSO: Update Action Item Matrix, sort by due date, and post on the AMS website.





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Trent Martin provided the Action Item Matrix Closure Form and Action Item Matrix binder for Steve Porter's approval. Form and binder were approved and to be maintained by Donna Cox.

Agenda Item 1: Change Requests - Trent Martin/LMSO

- New Action Item (04-084) Donna Cox/LMSO: Add EA2 representative Irene Piatek to the CCB member list and CCB distribution list.
- New Action Item (04-085) Donna Cox/LMSO: Send out an email to the CCB members for their approval AMS-CR-04-001 and AMS-CR-04-002 and provide list of who did and did not respond to Steve Porter. This is needed for the quality system.
- <u>CR AMS-02/D-001 (issued as AMS-CR-04-001)</u>: AMS-02 Configuration Management Plan (Revision A) submitted by Trent Martin/LMSO
 - No one present at CCB had any further modifications to the document.
 - o CR was approved.
 - o Steve Porter signed off on the document. Nancy Munoz also initialed her approval.
- <u>CR AMS-02/D-002 (issued as AMS-CR-04-002):</u> AMS-02 Project Plan (Revision B) submitted by Trent Martin/LMSO
 - Win Reid mentioned his concern about references to the Flight UF4.1 in case of flight schedule change. Decision was to leave reference as is and to complete a Change Request to correct flight reference if there is a change.
 - Win Reid also asked about requirements matrix. He was told that all requirements would be mentioned in the Master Verification Plan (MVP). Draft of the MVP is due November 30, 2004.
 - No one else present at CCB had any further modifications to the document.
 - o CR was approved.
 - Steve Porter signed off on the document. Nancy Munoz also initialed her approval.





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New Action Item (04-086) – Donna Cox/LMSO: Make copy of AMS-CR-04-001 and AMS-CR-04-002 and all pertinent documentation to be filed in LMSO Document Library. Originals to be returned to Nancy Munoz to be filed in EA project office.

Agenda Item 2: Action Item Status - Steve Porter/NASA-JSC/EA

- New Action Item (04-087) Donna Cox/LMSO: Update Action Item Matrix so that action items 04-007, 04-010, 04-018, 04-044, 04-053, and 04-073 show that they are on the agenda for the CCB Meeting scheduled on September 8, 2004.
- Action Item (04-018) David Kaplan/NT: Win Reid spoke with L. D. Stevenson on August 17, 2004 and L.D. Stevenson will get with the VIT Team to see if they have any requirements.
- Discussion about ACOP manifest included the following:
 - Draft letter coming out of ISS to state rationale for the move of the ACOP flight.
 - New Action Item (04-088) Bob Miley/NT & Win Reid/OZ2: To get a draft of the flight manifest and/or to contact Jorge.
 - Sam Ting wants two ACOPs to fly.
 - Bob Miley stated that stowage on ISS is critical and cannot handle storage of 6 months of hard drives.
 - New Action Item (04-089) Bill Hungerford/AMS: To work with AMS Collaboration about ISS stowage problem and develop a plan for the number of hard drives that will be required for AMS.
 - New Action Item (04-090) Paul Nemeth/LMSO & Bill Hungerford/AMS: To work on when ACOP needs to fly and if it needs to be in place 3-6 months ahead of AMS-02. Then they need to get with Bob Miley to further discuss ACOP.
- Action Item (04-057) Trent Martin/LMSO & Bill Hungerford/AMS: Draft response letter to Sam Ting. Recommendation is to provide for two LM engineers to witness the ECAL final assembly, but ask the collaboration to provide a witness for the final sine sweep test of the flight ECAL. The justification is that LM has already witnessed 6 sine sweep test and 3 sine burst test of the prototype ECAL and the same test facility will be performing the flight test; Layout plan and present to CCB on September 8, 2004; Rational will need to be laid out in the MVP and Steve Porter will





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send it to Sam Ting for approval.

- □ Action Item (04-061) & (04-062) Bill Hungerford/AMS: Bill Hungerford will discuss action items with Mike Capell and provide new date when action will be complete.
- □ New action items have been added to the Open Action Items Matrix (Attachment 2).

Steve Porter adjourned meeting at 2:50 pm.

CCB Chairman Approval: Date: 10/7/09





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Attachment 1

CCB Sign-in Sheet





August 18, 2004 2:00 - 4:00 pm Building 1, Room 920L

Position	Name (a)	Phone Number	Signature
Chairman	Porter, Steve	281-244-7149	P
Member	Vaughan, Anne	281-244-0257	anne Vaughan
Member	Conwell, J.J.	281-483-1178	-ou7 -
Member	Kaplan, David	281-483-3729	David Kaplan
Member	Reid, Winston	281-226-4809	W/Bid
Member	Keifenheim, Jack	321-867-6028	deflectives conneting to telean
Member	Hungerford, Bill	281-218-7022	-ou7 jained via telecon late.
Member	Martin, Trent	281-333-6114	mm-
Secretary	Cox, Donna	281-333-6468	Donna Sisanne Cox
	EAZ Irane M. Piatek	281 483 9043	Jan 3. Bistet





Position	Name .	Phone Number	Signature 1
Attendee	Arnold, Larissa	281-483-0623	
Attendee	Bailey, Chuck	281-244-5093	
Attendee	Caldwell, Steve	281-333-6263	
Attendee	Capell, Mike		
Attendee	Clark, Craig	281-333-6779	Ong Clar
Attendee	Cook, Gene	281-244-8467	May
Attendee	Corbin, Cheryl	281-244-1830	
Attendee	Cornwell, John	281-483-9164	On Travel – will not be attending
Attendee	Dennett, Peter		
Attendee	Donahoe, Stan	281-483-4256	
Attendee	Echols, Ray	256-544-5354	
Attendee	Elmore, Dave	281-333-7496	
Attendee	Farner, David	281-333-6481	
Attendee	Fohey, Mike	281-333-6115	m & Jokey
Attendee	Freund, Teresa		
Attendee	Gibb, Margaret	281-244-0284	
Attendee	Hall-Farley, Kazuko		
Attendee	Harold, Ross A.	281-333-6134	RAMI
Attendee	Harris, Mary	281-483-82661	





Position	Name .	Phone Number Signature
Attendee	Harris, William	
Attendee	Hill, Leland	281-333-6539
Attendee	Holcomb, Laura	
Attendee	Jeevarajan, Judith	281-483-4528
Attendee	Lear, Dana	281-483-2984
Attendee	Lewis, Ruthan	301-286-1694
Attendee	Lear, Dana	281-483-2984
Attendee	Lewis, Ruthan	301-286-1694
Attendee	Miley, Bob	281-226-4968 R. M. Q
Attendee	Miller, Herman	281-333-6342
Attendee	Morgan, Susan	281-483-4935
Attendee	Mott, Phil	281-333-6451
Attendee	Munoz, Nancy	281-483-9015
Attendee	Nemeth, Paul	281-333-6116
Attendee	Orndoff, Evelyne	281-483-9117
Attendee	Petri, David	281-483-9622
Attendee	Piatek, Irene	281-483-9043
Attendee	Rains, George (Ed)	281-244-8111
Attendee	Roberts, J.D.	281-333-6819





Position	Name 🚾	Phene Number	Signature
Attendee	Rybicki, Dan	281-244-5181	
Attendee	Sauceda, Tania	281-244-1612	
Attendee	Schoenberg, Rich	281-483-6437	
Attendee	Schwarz, Roger	281-483-2378	
Attendee	Stanford, John	281-483-1347	John Stead
Attendee	Stevenson, L. D.	281-244-8890	
Attendee	Tutt, Chris	281-333-7634	
Attendee	Dillard, Mark	281-244-8640	
Attendee			





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Attachment 2

Open Action Items Matrix

Number	Date Assigned	Meeting Action Assigned	Action	Actionee (Note that the FIRST actionee is the Action Lead)	Due Date	Outcome	Date Completed
04-061	08/01/04	CERN TIM July 2004	Review the Power Supply Distribution Crate development plan wrt EM-Protoflight -vs- EM-QM-FM requirements.	Bill Hungerford		08/11/04 - Bill Hungerford needs formal letter from Mike Capell; 08/18/04 - Bill Hungerford will discuss action items with Mike Capell and provide new date when action will be complete.	
04-062	08/01/04	CERN TIM July 2004	Provide a decision point for eCos -vs- Linux software operating systems, as this decision is required NOW to prevent work resources waste.	Bill Hungerford		08/18/04 - Bill Hungerford will discuss action items with Mike Capell and provide new date when action will be complete.	
04-088	08/18/04	CCB 08/18/04	To get a draft of the flight manifest and/or to contact Jorge.	Bob Miley Win Reid			
04-089	08/18/04	CCB 08/18/04	To work with AMS Collaboration about ISS stowage problem.	Bill Hungerford			
04-090	08/18/04	CCB 08/18/04	To work on when ACOP needs to fly and rational as to why it needs to be in place 3-6 months ahead of AMS-02. Then they need to get with Bob Miley to further discuss ACOP.	Paul Nemeth Bill Hungerford			
04-085	08/18/04	CCB 08/18/04	Send out an email to the CCB members for their approval AMS-CR-04-001 and AMS-CR-04-002 and provide list of who did and did not respond to Steve Porter. This is needed for the quality system.	Donna Cox	08/18/04		
04-083	08/18/04	CCB 08/18/04	Update Action Item Matrix, sort by due date, and post on the AMS website.	Donna Cox	08/20/04		
04-084	08/18/04	CCB 08/18/04	Add EA2 representative Irene Piatek to the CCB member list and CCB distribution list.	Donna Cox	08/20/04		
04-086	08/18/04	CCB 08/18/04	Make copy of AMS-CR-04-001 and AMS-CR-04- 002 and all pertinent documentation to be filed in LMSO Document Library. Originals to be returned to Nancy Munoz to be filed in EA project office.	Donna Cox	08/20/04		

Number	Date Assigned	Meeting Action Assigned	Action	Actionee (Note that the FIRST actionee is the Action Lead)	Due Date	Outcome	Date Completed
04-087	08/18/04	CCB 08/18/04	Update Action Item Matrix so that action items 04- 007, 04-010, 04-018, 04-044, 04-053, and 04-073 show that they are on the agenda for the CCB Meeting scheduled on September 8, 2004.	Donna Cox	08/20/04		
04-018	07/15/04	Rebaselining	Define the plan for the assuring quality and reliability for the NASA provided Payload Integration Hardware (PIH) as well as the plan for providing insight into the quality and reliability of the AMS Experiment.	Dave Kaplan	09/08/04	Memorandum in work; process is ongoing; 08/17/04 - Win Reid spoke with L. D. Stevenson and L.D. Stevenson will get with the VIC/FIT Team to see if they have any requirements.	
04-057	08/01/04	CERN TIM July 2004	Decide if NASA Project Team surveillance is required for ECAL assembly and vibration testing in China.	Trent Martin Bill Hungerford	09/08/04	08/10/04 - Email sent, some representation is required in coordinating specific personnel and dates; 8/18/04 - Ask collaboration to have someone other than Chinese present to view and sign-off on report that proper bolts and proper torque were used during Sine Sweep; Steve Porter proposed that either Bill Hungerford or Mike Capell, but will have to pass that by Sam Ting; If Sam wishes to have an LMSO representative present, all expenses would be funded by collaboration; Layout plan and present to CCB on September 8, 2004; Rational will need to be laid out in the MVP and Steve Porter will send it to Sam Ting for approval.	
04-073	08/04/04	CCB 08/04/04	Steve Porter needs numbers for turn on, nominal operations, worst case cold case, and survival as soon as possible for the PIA due out October 2004	Mike Capell	09/08/04	In work	
04-070	08/04/04	CCB 08/04/04	Dredge up crew photo requirements from OZ and crew office	Bob Miley	09/15/04		
04-079	08/04/04	CCB 08/04/04	Get with Bill Hungerford to discuss ideas for framework, processing and typing of level 3 appendix	Mike Fohey	09/15/04	08/11/04 - Meeting scheduled for 08/18/04 to discuss	

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Number	Date Assigned	Meeting Action Assigned	Action	Actionee (Note that the FIRST actionee is the Action Lead)	Due Date	Outcome	Date Completed
04-006	07/15/04	Rebaselining	CAWG/PICB documentation needs to be retrieved from the station website and posted on the AMS website (get with Bob Miley)	Donna Cox	09/18/04	08/01/04 - Plan due by 09/18/04; 08/09/04 - Sent email to Bob Miley; 08/11/04 - Bob Miley to send links to Donna Cox	
04-007	07/15/04	Rebaselining	Submit waiver for payload envelope and robotics clearance through AMS CCB and then through PICB	Bob Miley	09/18/04	08/11/04 - Plan waiver action was added to 09/08/04 agenda	
04-008	07/15/04	Rebaselining	CEIT? Shuttle guys to look at the payload so there are no problems with installation/integration – put on schedule	Paul Nemeth	09/18/04	Spoke with Jack Keifenheim & he agrees that CEIT is SOP for KSC processing whilst the Bird is on the Pad; When I get the input from Jack, I will present my plan at CCB; 08/11/04 - Paul Nemeth to provide writeup	
04-010	07/15/04	Rebaselining	Will clarify the BFS GPC time tagged command in PIA per Steve Porter	JJ Conwell	09/18/04	08/01/04 - Plan due by 09/18/04; JJ Conwell to talk at the meeting on 09/08/04	
04-011	07/15/04	Rebaselining	To present detailed MIP/ICD plan to CCB – must include interim dates	JJ Conwell MOD/OZ	09/18/04	MIP Kickoff Meeting scheduled on August 25, 2004	
04-012	07/15/04	Rebaselining	Present logic train of control for ACOP and AMS to CCB (per Steve Porter)	Paul Nemeth	09/18/04	Will present by 09/18/04	
04-026	07/15/04	Rebaselining	How to go about determining how to solve the magnetic field problem; PAS; programmatic waiver?	Bob Miley	09/18/04	Draft waiver to complete S3 outboard empty or have items that magnetically susceptible; 08/11/04 - Will be discussing this with Nancy Wilks next week	
04-028	07/15/04	Rebaselining	Check for open consensus report concerning Quech.	Trent Martin Bob Miley Paul Nemeth	09/18/04	08/01/04 - Plan due by 09/18/04; Paul Nemeth spoke Bob Miley 08/09/04 and he is trying to locate the report; Bob Miley sent email - currently reviewing; 08/11/04 - Documentation to be in the 03/05 Hazard Report	
04-031	07/15/04	Rebaselining	Discuss having data available at KSC and support there for flight controllers; MOD requests safety data at JSC	Paul Nemeth	09/18/04	08/01/04 - Plan due by 09/18/04; In work	
04-032	07/15/04	Rebaselining	Level of detail for the contingency return planning needs to be discussed	MOD/OZ	09/18/04	08/01/04 - Plan due by 09/18/04; 08/11/04 - Larissa Arnold will confirm	

Number	Date Assigned	Meeting Action Assigned	Action	Actionee (Note that the FIRST actionee is the Action Lead)	Due Date	Outcome	Date Completed
04-038	07/15/04	Rebaselining	Verification tracking log to be controlled by AMS Project Team; track full closure of items; Steve wants application to track each item – open paper management software; must be configuration controlled	Steve Porter Trent Martin Nancy Munoz	09/18/04	08/01/04 - Plan due by 09/18/04; Working on getting OPMT or similar system; 08/11/04 - Steve Porter will handle this action	
04-042	08/04/04	CERN TIM July 2004	Develop plan for certification of CO2 condenser in TCS	Craig Clark	09/18/04	08/01/04 - Plan due by 09/18/04; In work	
04-056	08/01/04	CERN TIM July 2004	Provide the plan for Surveillance of Safety Critical assembly and test steps of Collaboration Hardware.	Chris Tutt Bill Hungerford Paul Nemeth	09/18/04	08/01/04 - Plan due by 09/18/04; In work	
04-068	08/04/04	CCB 08/04/04	Define detector steps for the MVP	Bill Hungerford	10/01/04		
04-069	08/04/04	CCB 08/04/04	Coordinate closeout photo tasks; Need to verify we get closeout photos before hardware is closed up; Need update the pre-flight imagery plan	Leland Hill Chris Tutt	10/01/04	In work	
04-004	07/15/04	Rebaselining	Work with hardware providers in ISS and STS to transfer H/W to AMS	Bob Miley Trent Martin	10/31/04	LM has provided an email list of hardware, part numbers; who and what location	
04-043	08/01/04	CERN TIM July 2004	Modify the PIA power allocation for AMS from current allocation to 3.0 kW peak, 2.3 kW nominal, 3.0 <tbd kw="">2.3kW for worst case cold, and TBD<2.2kW for survival.</tbd>	Bob Miley Paul Nemeth	09/31/04		
04-044	08/01/04	CERN TIM July 2004	Determine if the ISS PCU Xenon fill capability can be used for the AMS P/L.	Steve Porter	09/31/04	08/11/04 - Action for Jack Keifenheim to talk to KSC about capability; 08/16/04 - Jack Kefenhiem researching, needs AMS Collaboration to tell KSC what they need; it is possible KSC might have equipment to configure this; will present at meeting on 09/08/04; 08/17/04 - Peter Fisher (MIT) will be coordinating requirements in the experiment side	

AMS Open Action Items Matrix

Number	Date Assigned	Meeting Action Assigned	Action	Actionee (Note that the FIRST actionee is the Action Lead)	Due Date	Outcome	Date Completed
04-046	08/01/04	CERN TIM July 2004	Build an integrated logic flow, assembly, and test (LFAT Schedule?) schedule and for the payload at CERN. Include a clear plan for Quality Control and MRB Authority for the payload integration and assembly at CERN. Ensure that an iterative electrical / functional test scheme is included to ensure adequate operation of hardware / software before access to that "installed" crate or detector is no longer possible.	Bill Hungerford	09/31/04	08/01/04 - Plan due by 09/18/04; Questionare sent to detector groups to initiate process. Meeting scheduled at CERN Sept 13 and 14, chaired by Giuliano Laurenti, to consolidate and refine inputs from various detector and sub-system groups. Should result in development of preliminary LFAT Schedule for review at October TIM	
04-047	08/01/04	CERN TIM July 2004	Plan for meeting of Code T and Prof. Ting.	Steve Porter	09/31/04		
04-048	08/01/04	CERN TIM July 2004	Set up meetings for Prof Ting during the TIM at JSC with Center Director, Dir of EA, ISS Program Manager, OZ, and Doug Cooke.	Steve Porter Yolanda Marshall	09/31/04		
04-049	08/01/04	CERN TIM July 2004	Present a plan and coordination for AMS TIM's at JSC and KSC; FIT test at KSC	Donna Cox Jack Kefenhiem	09/31/04	08/01/04 - Plan due by 09/18/04; Currently working on list of international visitiors with L. Barrin at CERN; Goal is to have requests submitted to KSC no later than 11/12/04	
04-050	08/01/04	CERN TIM July 2004	Review AMS with Doug Cooke wrt providing Radiation Shielding for Exploration and discuss the need to maintain the NASA POC with the current AMS Team.	Steve Porter Trent Martin	09/31/04		
04-051	08/01/04	CERN TIM July 2004	Finalize SSRMS requirements around the AMS-02	OZ/Bob Miley	09/31/04	08/01/04 - Plan due by 09/18/04; 08/11/04 - Needs hazard report	
04-052	08/01/04	CERN TIM July 2004	Begin the discussion wrt to AMS-02 PAO Effort.	Steve Porter Trent Martin	09/31/04		
04-053	08/01/04	CERN TIM July 2004	Review the activation requirement agreement with the need to activate with control at JSC, not MSFC POIC.	Paul Nemeth Anne Vaughan Ray Echols Geoff Lochmaier	09/31/04	08/01/04 - Plan due by 09/18/04; 08/11/04 - Added to agenda on 09/08/04; Action for Geoff Lockmier to give an overview; 08/18/04 - Anne Vaughan requested that the presentation be moved to 09/15/04, she will not be able to attend the meeting on 09/01/04 and would like to hear the presentation	

Number	Date Assigned	Meeting Action Assigned	Action	Actionee (Note that the FIRST actionee is the Action Lead)	Due Date	Outcome	Date Completed
04-054	08/01/04	CERN TIM July 2004	Review the thermal survival potential and testing requirements for AMS Detectors and Electronic Crates. Provide a recommendation for a "cold soak" tolerance test (based on ISS Program recommendation to expect 8 hrs./event X 3 events/year powerdown) for Collaboration hardware testing.	Craig Clark Bill Hungerford Paul Nemeth	09/31/04	08/01/04 - Plan due by 09/18/04	
04-055	08/01/04	CERN TIM July 2004	Review the composite panel strength testing results and requirements from the Structures Working Group with variability of data and relative paucity of data.	Chris Tutt	09/31/04	08/01/04 - Plan due by 09/18/04	
04-058	08/01/04	CERN TIM July 2004	Provide the plan for Phase II Safety Review and Collaboration preview and dry runs.	Chris Tutt Bill Hungerford	09/31/04	08/01/04 - Plan due by 09/18/04	
04-059	08/01/04	CERN TIM July 2004	Determine if the JSC EEE Parts Board needs to review the AMS P/L electronics parts / processes / documentation.	Dave Kaplan	09/31/04		
04-060	08/01/04	CERN TIM July 2004	Show requirements for AMS Critical health data transmittion via S-Band.	Paul Nemeth Bob Miley	09/31/04	In work	
04-063	08/01/04	CERN TIM July 2004	Make sure software test at KSC for Final Flight Hardware Test is funded.	Paul Nemeth	09/31/04		
04-064	08/01/04	CERN TIM July 2004	Provide information to Collaboration Assembly & Integration Team @ CERN on a smart-tool for anthropomorphic analysis of AMS Assembly.	Chris Tutt	09/31/04	08/01/04 - Plan due by 09/18/04	